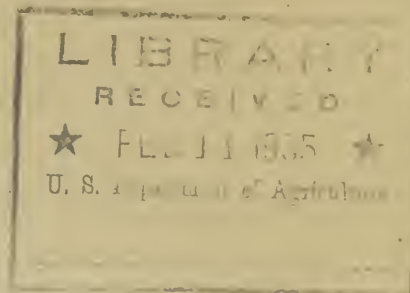


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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Economics



AGRICULTURAL INCOME AND PURCHASING POWER

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Address, Joint Session, American Statistical Association, and
American Farm Economic Association, Chicago, Dec. 28, 1934
devoted to discussions of the topic
Changes in the Aggregate Volume and Distribution of
Purchasing Power During Recovery

The gross income from agriculture for the 1934 season, ^{1/} probably will be about \$7,200,000,000, compared with about \$6,300,000,000 for 1933 and \$5,300,000,000 for 1932, the low point in the depression. This is an increase of 36 percent in 2 years. Cash income will probably increase from \$4,370,000,000 to about \$6,200,000,000, an increase of \$1,830,000,000 or 42 percent. Rental and benefit payments made material contributions to this increase, amounting to \$271,000,000 in 1933 and about \$589,000,000 in 1934. The actual position of the farm operator has been improved more than is indicated by these figures. A 3-year period, 1930-32, in which income was insufficient to pay all expenses and farm-hand wages to the operator, has now been followed by 2 years of income sufficient to return something to the operator for his management and capital. The income to farm operators from 1934 production, for labor, capital, and management, after paying expenses, probably would purchase about twice the quantity of the goods that could be bought by that for 1932.

The above statement is a brief summary of the changes in agricultural income and purchasing power since 1932. The estimate for 1934 is preliminary, being based primarily upon production and marketings through November 1934. The cash income from the marketings of farm products and benefit payments in the first 11 months of 1934 exceeded the income for the corresponding months of 1933 by one billion dollars. The gross income from the agricultural production of 1933 has been estimated at \$6,256,000,000. This includes an estimate of a little less than \$1,000,000,000 as the value of the farm products consumed on the farm. Assuming no significant change in the farm value of the products consumed on the farm, it seems probable that the gross income for 1934 will amount to about \$7,200,000,000. (Table 1 and fig. 1 and 2.)

^{1/} The season here used is the calendar year for livestock and the crop-marketing period of each year's crop production. See Crops and Markets, Aug. 1934, pp. 314-335.

Table 1.-A preliminary estimate of gross farm income for 1934 in comparison with 1932 and 1933, by groups of commodities ^{1/}

Source of income	1932	1933	1934
	Million dollars	Million dollars	Million dollars
Crops:			
Grains	450	506	542
Cotton and cottonseed	464	684	711
Fruits and nuts	325	376	402
Vegetables	609	747	702
Sugar crops	69	81	60
Tobacco	107	179	260
All other	264	301	330
Total crops	2,288	2,874	3,007
Livestock and livestock products:			
Meat animals	1,123	1,155	1,329
Poultry and eggs	609	560	588
Dairy products	1,260	1,263	1,427
Wool	30	75	82
All other	21	27	31
Total livestock	3,043	3,080	3,457
Total crops and livestock	5,331	5,954	6,464
Rental and benefit payments:			
Cotton		167	118
Wheat		98	102
Tobacco		6	40
Corn-hog			306
Sugar			23
Total		271	589
Purchases of livestock		31	110
Grand total	5,331	6,256	7,163

Division of Statistical and Historical Research, Bureau of Agricultural Economics.

^{1/} The above estimates represent livestock production for market in the calendar year indicated and crop production for the season beginning with the harvest season within the year. The rental and benefit payments are those made within the calendar year.

Between 1932 and 1933 the gross farm income increased about \$900,000,000, of which \$300,000,000 was paid by the Government as rental and benefit payments and for livestock. In this first year of recovery crops contributed most of the gains. The income from crops increased about \$586,000,000, the greatest gain being from cotton which contributed \$220,000,000. Fruits and vegetables contributed about \$190,000,000 and tobacco over \$70,000,000. The contribution of the grain crops was rather slight, mainly on account of the short wheat crop of 1933. There was practically no increase in the income from livestock products. The increase in dollar income from crops was due primarily to the revaluation of the dollar, the normal reaction of the raw materials markets to a turn in the general price level, and improvement in general business conditions. Livestock prices did not turn up as quickly as the prices of crops because the production of livestock was continuing to increase and the increase in the dollar purchasing power of urban consumers in the latter part of 1933 was not great enough to offset the effect of the great depression in the early part of 1932.

The gain in gross farm income between 1933 and 1934 will probably be about \$900,000,000, of which livestock, including Government purchases, has contributed about \$450,000,000 and benefit payments about \$318,000,000. All crops made slight gains, but the total crop gain was only a little more than \$100,000,000, most of which was contributed by tobacco. In the case of many crops the advance in prices was barely more than sufficient to offset the reduction in volume for market.

The income from all classes of livestock products increased. The income from dairy production gained about \$165,000,000, meat animals added \$175,000,000, and increased Government purchases have added about \$80,000,000 to the income of meat-animal producers. The marketing gains from livestock production are primarily the result of maintaining business activity, and, consequently, of maintaining urban consumer purchasing power in 1934 materially above the average for 1933. (Fig. 3.)

Against this description of changes in income, it is interesting to note the changes in volume of production and the changes in price. Crop production declined sharply between 1932 and 1934. (Fig. 4.) The production of 12 important crops declined more than one-third in these 2 years. The greatest reductions were in grain crops which dropped about one-half, and in cotton which was reduced about one-fourth. The production of fruits and vegetables was well maintained in spite of the depression. The production of meat animals increased and dairy production continued on a high level. The production of meat animals increased nearly 8 percent between 1932 and 1933, and then added 12 percent more in 1934. Dairy production declined only slightly from 1932 to 1934 2/. It should be observed that the increased slaughter of meat animals registered here represents in part a liquidation of producing stock. Thus the volume of agricultural production declined only about 6 percent but prices rose. (Fig. 5.)

The prices of farm products rose from the low level of 65 percent of pre-war in 1932 to 101 in November 1934. (Fig. 6.) The first great gain in the prices of many of the important crops in 1933 was the result

2/ See "Net Agricultural Production in 1934" by C. M. Purves, in The Agricultural Situation, Dec. 1, 1934.

of prospects for smaller crops, the depreciation of the dollar in international exchange, and an improvement in the general economic situation. Further price gains were made in 1934 on account of reduced crops and increases in the dollar purchasing power of consumers. In January 1934 farm prices averaged only 77 percent of pre-war, and reached 103, a gain of 26 points, by September. The average price of meat animals in 1933 was lower than in 1932 and in January of this year was lower than the average for the previous year; but by September the price of meat animals had increased to 82 percent of pre-war compared with 55 in January. Dairy products gained from 84 in January to 105 in November. Summing up these price changes in terms of calendar years, the prices of agricultural products increased from 65 percent of pre-war to 70 percent between 1932 and 1933, and advanced to an average of about 90 percent in 1934, a gain of 38 percent. The net result of a decline of 6 percent in net production and this rise in prices is a gain of about 21 percent in the gross income from production between 1932 and 1934. Adding benefit payments raises the advance to 35 percent over the gross income of 1932.

Volume of Farm Purchasing Power

The subject calls for an estimate of changes in the aggregate volume of purchasing power as well as changes in income during recovery. In estimating the ability of farmers to buy commodities and services, the volume of cash income is more significant than gross income. Tentatively the cash income for 1934 is estimated at \$6,200,000,000, compared with \$5,300,000,000 for 1933 and \$4,370,000,000 for 1932. This would be the largest volume of cash income realized since 1930. Naturally the significance of these figures also depends upon how the money is spent and what changes have taken place in the prices of commodities and in the costs of services that farmers usually purchase or employ.

Fortunately for the farm operator, in a period of recovery the prices of many commodities and charges for services as a rule do not advance so rapidly as the prices of farm products. Consequently, income is likely to advance more rapidly than costs, and that has been the fact during the last 2 years. Costs that are ordinarily considered as fixed have declined under the pressure of the years of general depression, and have continued to decline after the upward turn in farm income. (Fig. 7.) Taxes on farm property have been reduced, so that the amount payable upon real estate and personal farm property probably has declined from \$476,000,000 in 1932 to about \$400,000,000 in 1934, and interest payable upon mortgage indebtedness and bank notes from \$596,000,000 to about \$500,000,000. In response to the general improvement, farm wages and operating expenses increased but not so rapidly as farm income. Wages to hired labor continued to decline from 1932 to 1933; they turned upward in 1934 but in that year amounted to only about \$370,000,000 as compared with \$380,000,000 in 1932. Operating expenditures have increased from \$1,455,000,000 to about \$1,675,000,000. Adding these items together and subtracting them from cash income leaves a balance of about \$3,250,000,000 for 1934, compared with \$1,463,000,000 in 1932. Thus cash available to the farmer for living, after the payment of operating costs, interest, and taxes, would be more than doubled between 1932 and 1934.

The cost of living on the farm increased to some extent so that the power to purchase commodities for living did not increase so much as

the dollar income available for living. An index of prices of commodities farmers usually buy for living on the farm increased from 108 to 122 percent of pre-war in these 2 years. Deflating the estimates of cash income available for operators' labor, capital, and management, we find that for 1934 equivalent to about \$2,650,000,000 in purchasing commodities for living on the basis of pre-war prices, compared with \$1,356,000,000 for 1932, an increase of 95 percent. Since the prices of commodities farmers purchase for use in production changed about to the same extent as the prices of those used for living, the real purchasing power of the farmer for commodities he buys doubled in the 2 years provided he chose to spend these net gains in the current purchase of commodities. Undoubtedly farmers used these gains in part to reduce accumulated debts or to make up deferred payments.

The relatively great improvement in purchasing power in the last 2 years is from a very low level, and represents in part forced readjustments in expenditures. The interest-bearing indebtedness of farmers has been reduced by default and by scaling down the debts as well as by repayment. Taxes on farm property have been scaled down as a matter of necessity. The maintenance of rural-community services depends upon tax payments, and in many cases these services have been adjusted toward what the farmer could pay, both by reduction in salaries and reductions in services. These readjustments have reacted upon rural communities that are engaged mostly in servicing the farmers and have reduced the purchasing power of all such communities. In some measure these readjustments tend to offset gains in the net dollar income of farmers so that the total commodity purchasing power of rural communities has not increased so much as the net gains to farmers.

If the taxes levied and interest payments due were paid, the incomes to farm operators in 1930, 1931, and 1932 were not sufficient to yield them wages equivalent to the low wages paid to hired hands in those years, but in the last 2 years they have earned the equivalent of farm-hands' wages for themselves and the working members of their families and a small margin of about 2 to 3 percent for return on the greatly reduced value of farm property.

It should not be overlooked that the income of the last year has been in part realized from a sale of productive livestock. The value of farm operators' capital has been reduced about 40 percent since 1929. This reduction has been due to the fall in prices. Undoubtedly machinery and equipment depreciated but livestock numbers increased. The net gain of 1934 has been spent in part in replacing and restoring farm machinery and equipment. The production of animal units at the end of the year, however, will be considerably less than at the beginning of the year.

The significance of the improvement in income and the changes in expenditures may be more clearly seen by noting the changes that took place between 1932 and 1933 as indicated by returns from individual farmers ^{3/}. Such data are not yet available for 1934. In the years 1932 and 1933 more than 6,000 farmers reporting to the United States Department of Agriculture showed the following interesting changes: The receipts from the sales of farm products increased from \$1,014 per farm to \$1,222;

^{3/} Crops and Markets, July 1934, pp. 262-263.

their taxes decreased from an average of \$149 to \$127, and interest payments declined from \$173 to \$160; the average cash outlay for hired labor per farm increased from \$185 to \$220; expenditures for machinery and tools increased from \$34 to \$44; and the amount spent on farm improvements increased from \$29 to \$40. These farms are larger and better than the average of all the farms of the United States, but they probably represent correctly the tendencies of farm operators in general with respect to the distribution of their income as it increases.

The cash available for maintenance of machinery and equipment and to keep up the condition of the farm is still probably far short of what would be required to keep the farm plant in good order. In 1929 the cash receipts of the reporting farms averaged \$2,669 per farm of which they spent \$159 on machinery and tools and \$125 on farm improvements. The differences in the average expenditures for improvements and for machinery between 1929 and 1932 or 1933 indicate some of the most significant adjustments made to the depression. From this it may also be observed that recovery on the farm is likely to be registered most quickly and most strikingly in those industries that supply goods and services which were sacrificed most during the depression.

The position of the farmer has also been improved by the refinancing of debts and the establishment of Federal credit agencies for providing loans to farmers on the basis of liberal appraisals and comparatively low rates. The refinancing of debts and the reduction of interest charges have contributed toward restoring the farmers' credit and have thus increased their current purchasing power, as rapidly perhaps, if not more rapidly, than the actual current increase in income. This improvement in the position of the farmer has been a basic factor in the general improvement in the financial and business conditions of rural communities throughout the United States.

Distribution of Gross Income from Farm Production, 1924 to Date



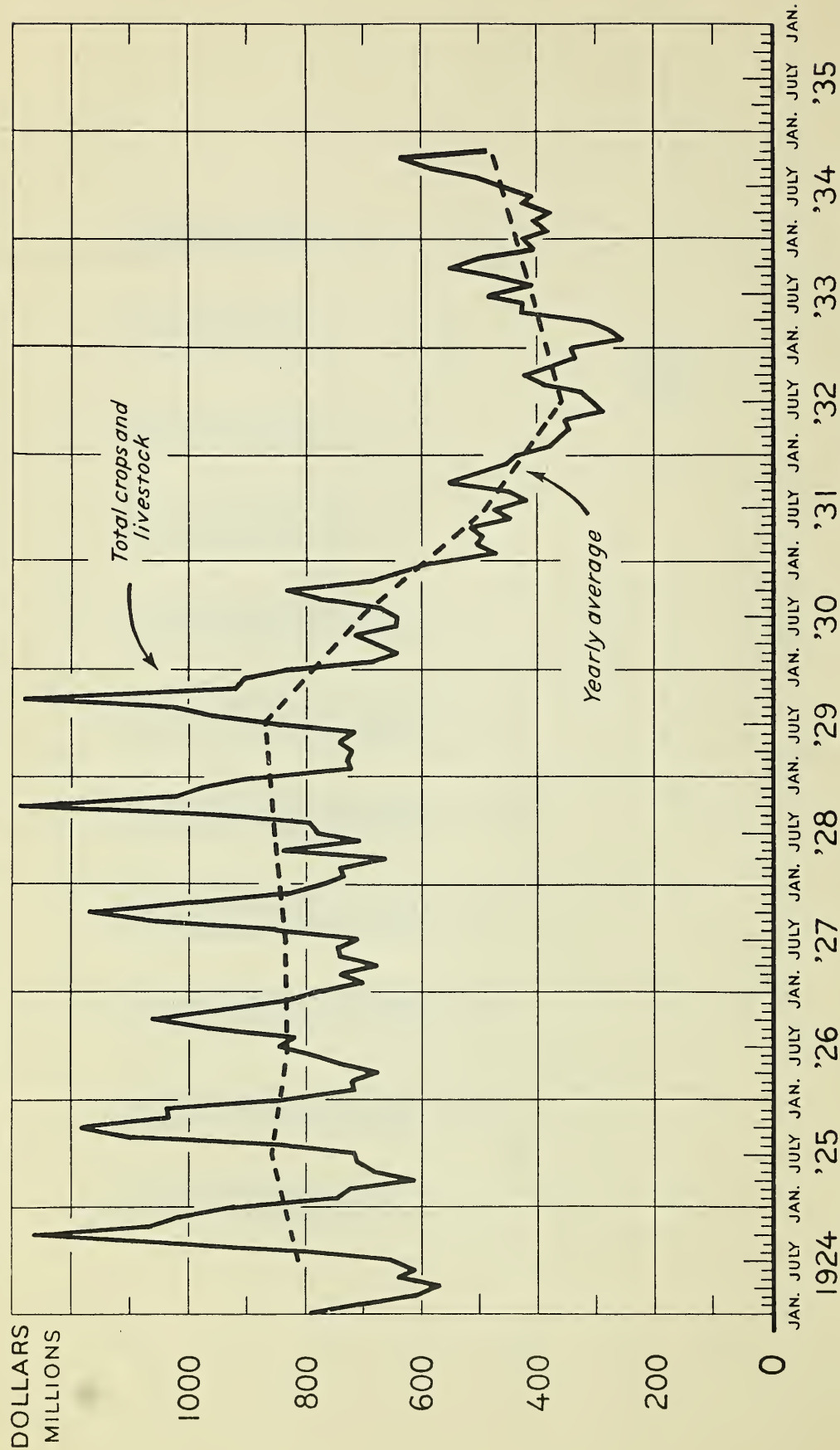
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FIGURE 1

INCOME FROM SALES OF FARM PRODUCTS, 1924 TO DATE



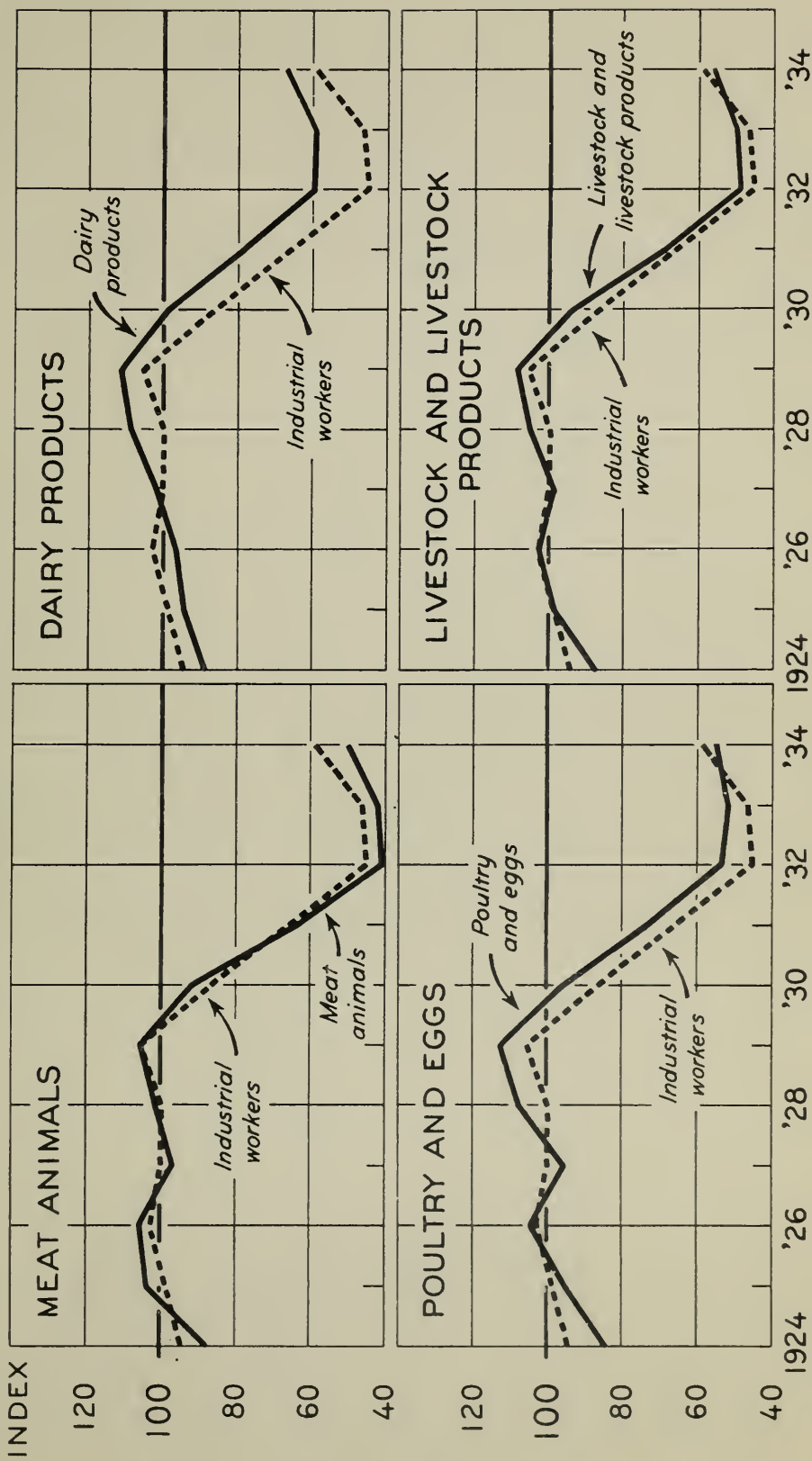
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FIGURE 2

CASH FARM INCOME FROM LIVESTOCK AND LIVESTOCK PRODUCTS BY GROUPS, AND INCOME OF INDUSTRIAL WORKERS, 1924 TO DATE

INDEX NUMBERS (1924-1929=100)



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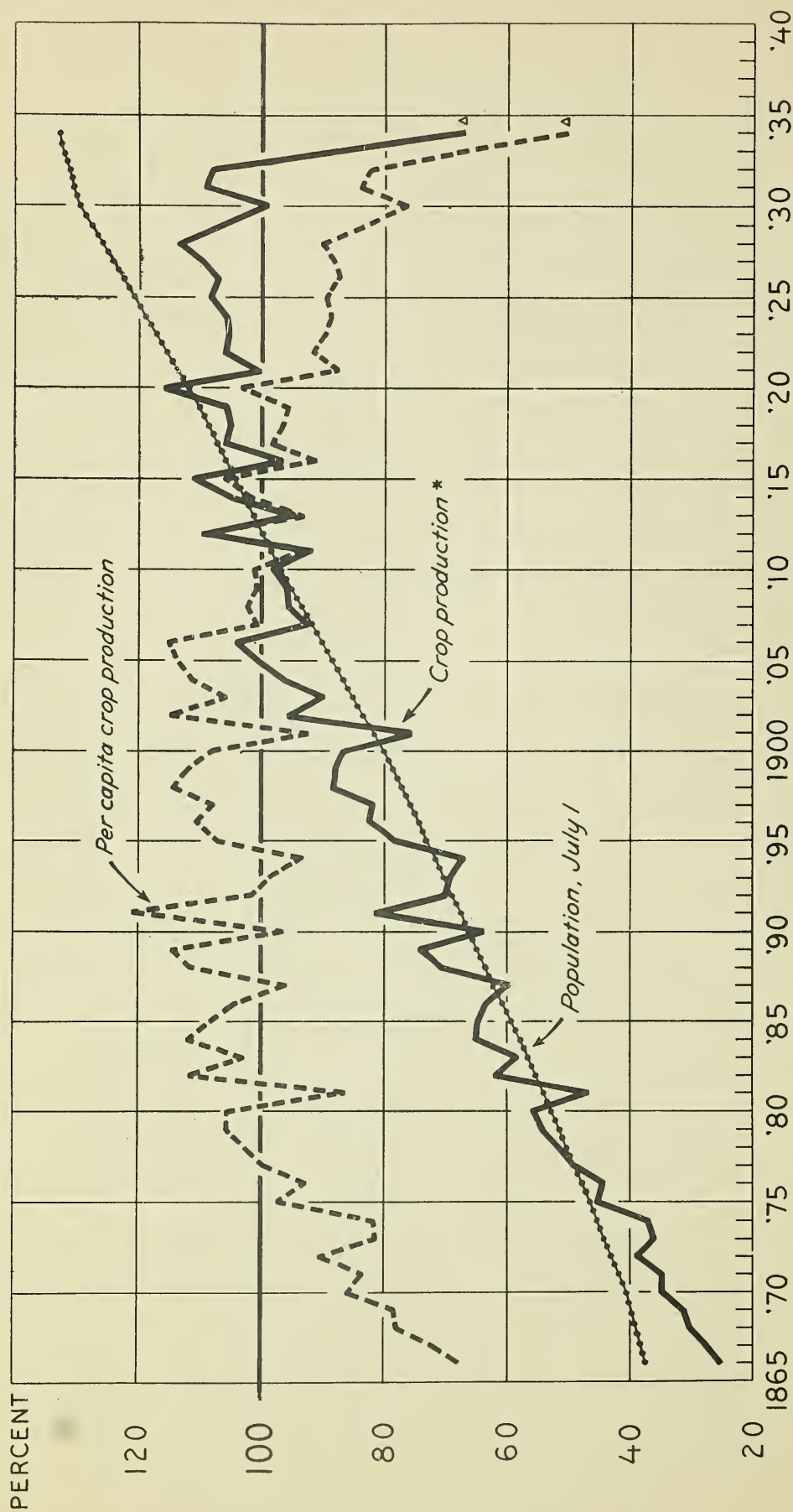
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FIGURE 3

CROP PRODUCTION, POPULATION, AND PER CAPITA CROP PRODUCTION, 1866 TO DATE

INDEX NUMBERS (1910-1914=100)



* BASED UPON PRODUCTION OF CORN, WHEAT, OATS, BARLEY, RYE, FLAXSEED, BUCKWHEAT, COTTON, POTATOES, SWEETPOTATOES, TOBACCO, AND TAME HAY
 Δ PRELIMINARY

FIGURE 4

Net Agricultural Production, Prices, and Income, United States, 1919 to Date

INDEX NUMBERS (1924-1929=100)

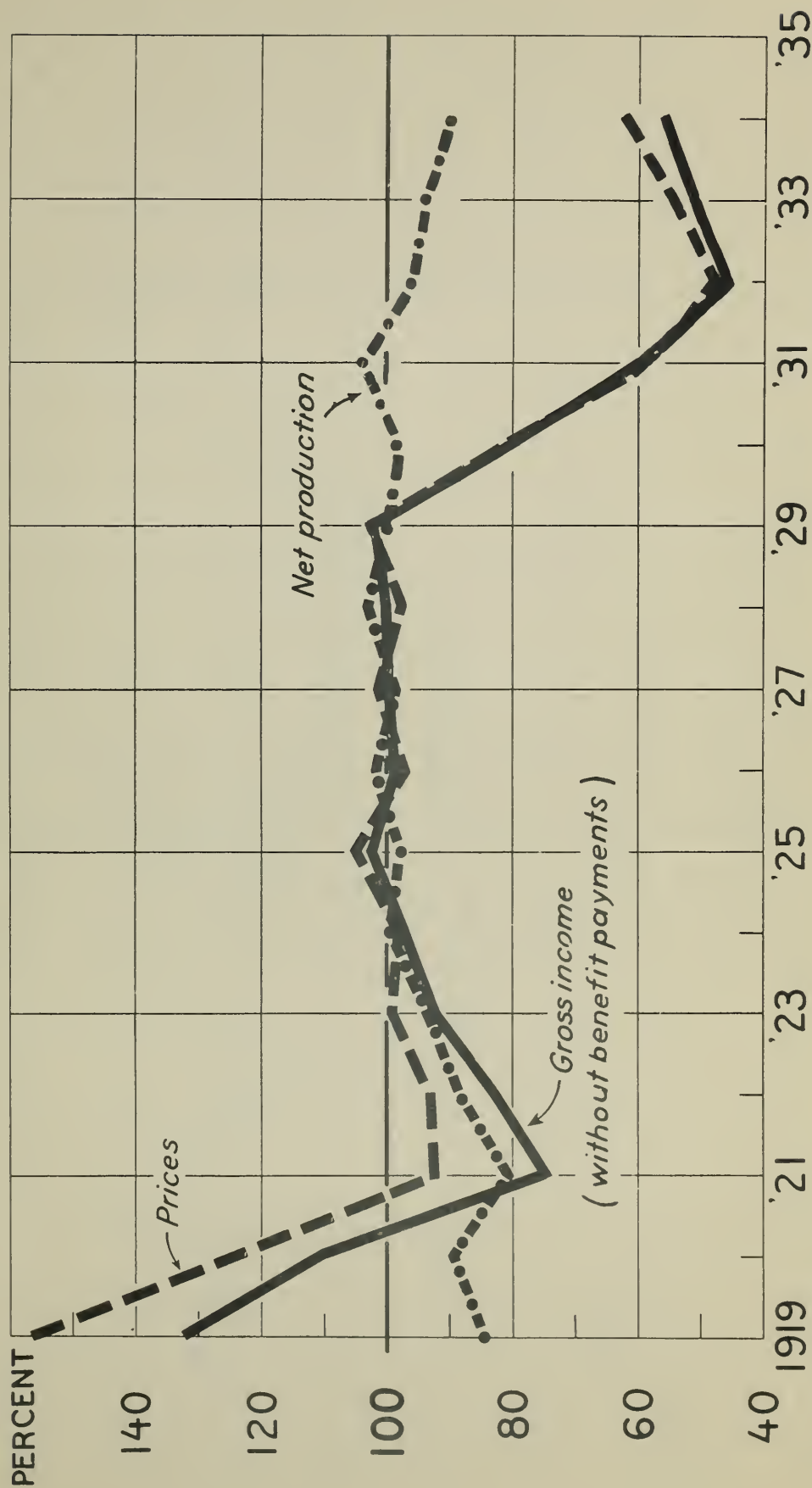
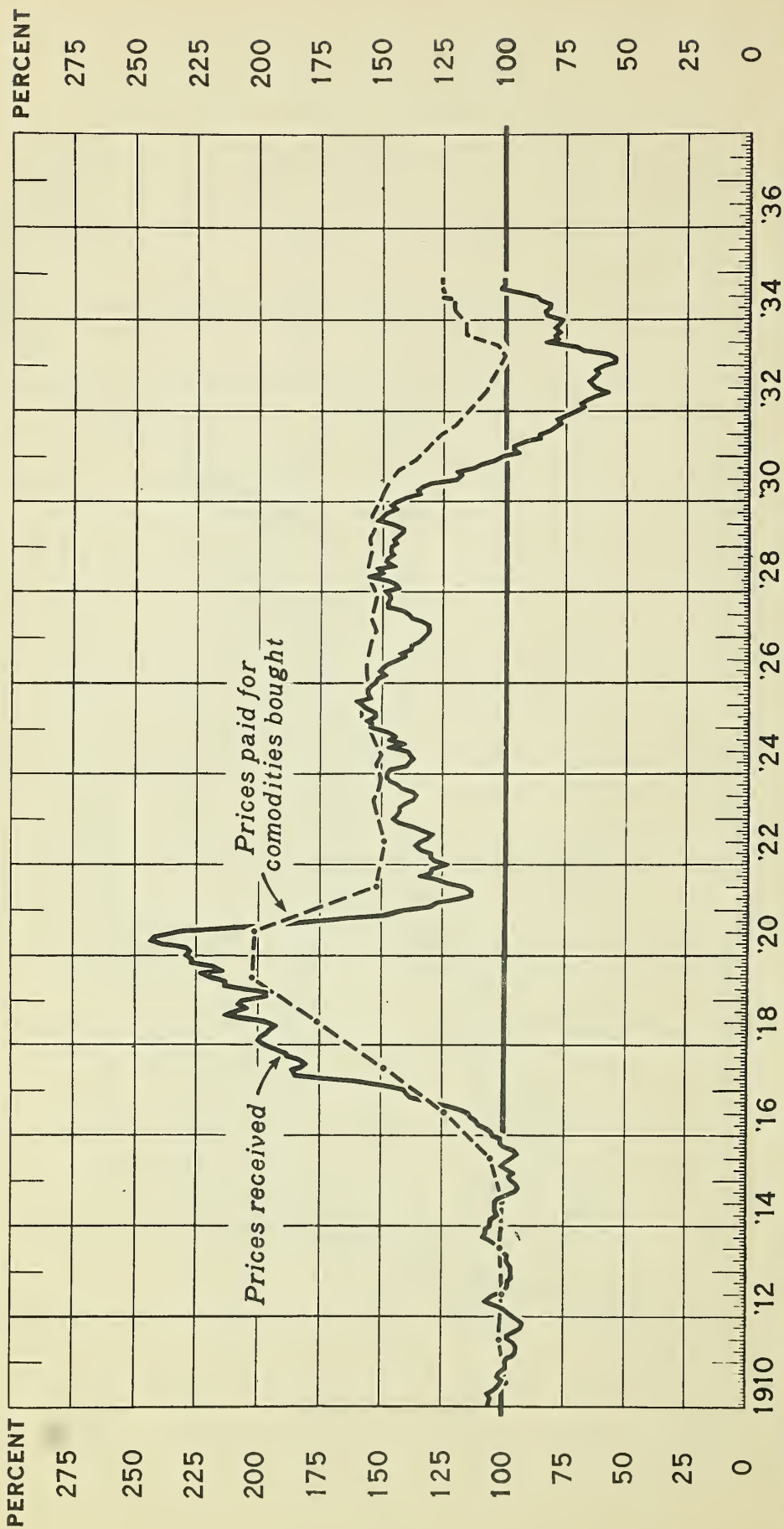


FIGURE 5

PRICES RECEIVED AND PAID BY FARMERS, 1910 TO DATE

INDEX NUMBERS (1910-1914=100)



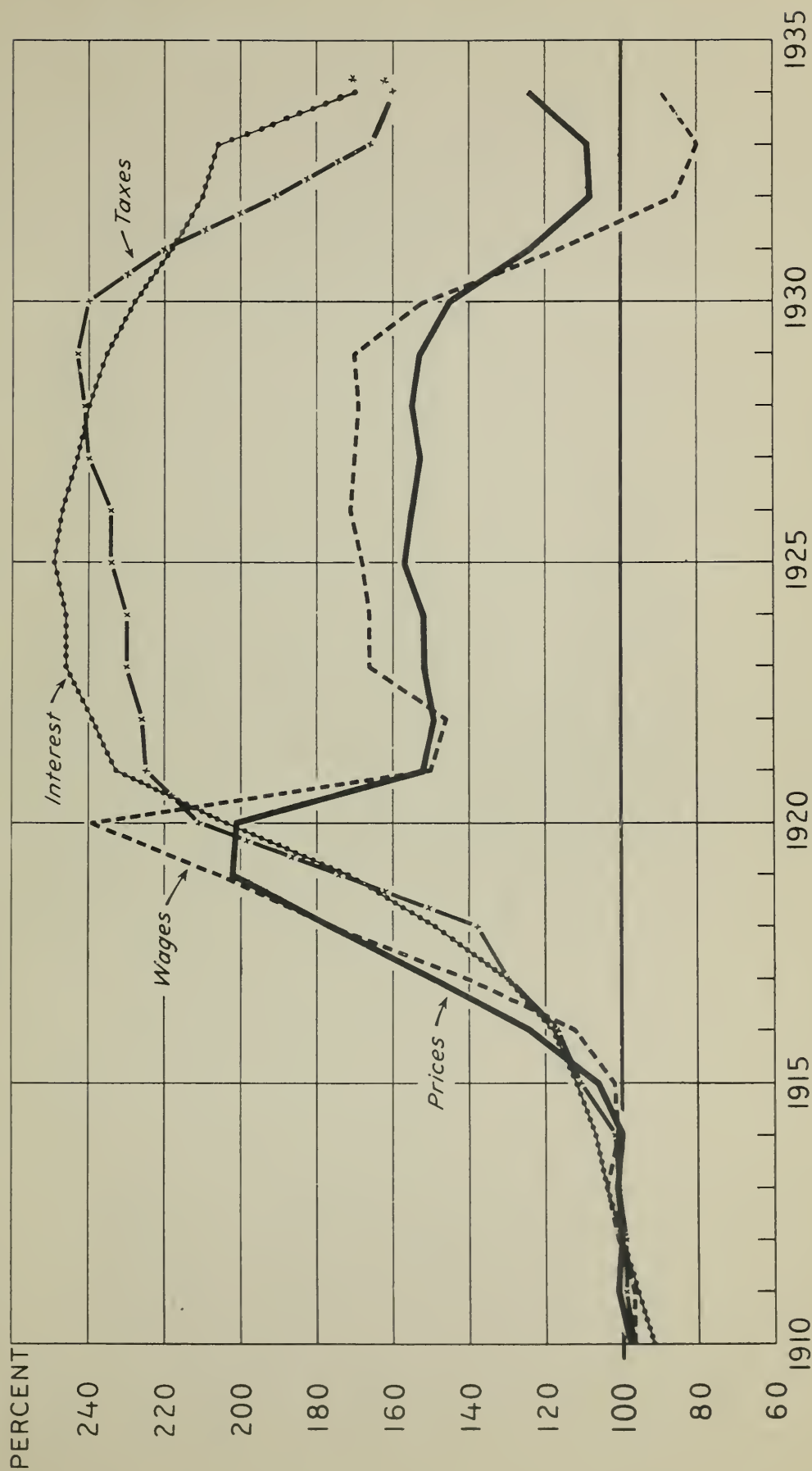
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FIGURE 6

PRICES PAID BY FARMERS, WAGES PAID TO HIRED LABOR, INTEREST PAYABLE ON MORTGAGE INDEBTEDNESS, AND TAXES PAYABLE ON FARM REAL ESTATE, 1910 TO DATE

INDEX NUMBERS (1910-1914 = 100)



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* PRELIMINARY

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FIGURE 7

